

**WHAT IS CLAIMED IS:**

1. A method of treating or preventing a light responsive disorder in a mammal, comprising administration of a therapeutically effective amount of light to said mammal, said light being generated by a light system, wherein said light system emits a balance of wavelengths to stimulate a circadian, photoneural, or neuroendocrine system of said mammal, said balance of wavelengths having a peak sensitivity ranging from 425 –505 nm.

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2. The method of **Claim 1**, wherein said light responsive disorder is at least one of the group of seasonal affective disorder (SAD), a sleep disorder, circadian disruption, eating disorders, menstrual cycle disorders, non-specific alerting or performance deficits, hormone-sensitive cancers, or cardiovascular disorders.

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3. A method of treating a light responsive disorder in a mammal, comprising administration of a therapeutically effective amount of light to said mammal, said light being generated by a light system, wherein said light system excludes emission of a balance of wavelengths to stimulate a circadian, photoneural, or neuroendocrine system of said mammal, said balance of wavelengths having a peak sensitivity ranging from 425 –505 nm.

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4. The method of **Claim 3**, wherein said light responsive disorder is at least one of the group of seasonal affective disorder (SAD), a sleep disorder, circadian disruption, eating disorders, menstrual cycle disorders, non-specific alerting or performance deficits, hormone-sensitive cancers, or cardiovascular disorders.

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5. A light system, comprising at least one light source, said light source emitting a balance of wavelengths to stimulate a mammalian circadian, photoneural, or neuroendocrine system, said balance of wavelengths having a peak sensitivity ranging from 425 –505 nm.

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6. A light system, comprising at least one light source, said light source  
excluding emission of a balance of wavelengths to stimulate a mammalian circadian,  
5 photoneural, or neuroendocrine system, said balance of wavelengths having a peak  
sensitivity ranging from 425 –505 nm.

7. A transparent composition, comprising at least one light filtering component,  
said light filtering component specifically transmitting a balance of wavelengths for  
10 stimulating a mammalian circadian, photoneural, or neuroendocrine system, said  
balance of wavelengths having a peak transmittance ranging from 425 –505 nm.

8. A translucent composition, comprising at least one light filtering component,  
said light filtering component specifically transmitting a balance of wavelengths for  
15 stimulating a mammalian circadian, photoneural, or neuroendocrine system, said  
balance of wavelengths having a peak transmittance ranging from 425 –505 nm.

9. A transparent composition, comprising at least one light filtering component,  
said light filtering component specifically blocking a balance of wavelengths for  
20 stimulating a mammalian circadian, photoneural, or neuroendocrine system, said  
balance of wavelengths having a peak sensitivity ranging from 425 –505 nm.

10. A translucent composition, comprising at least one light filtering component,  
said light filtering component specifically blocking a balance of wavelengths for  
25 stimulating a mammalian circadian, photoneural, or neuroendocrine system, said  
balance of wavelengths having a peak sensitivity ranging from 425 –505 nm.

11. A method of treating a light responsive disorder in a mammal, comprising  
administration of a therapeutically effective amount of light to said mammal, said  
30 light being generated by a light system, wherein said light system comprises at least  
one light source and at least one transparent material component, said light source  
emitting light through said transparent material component, said transparent material  
component comprising at least one light filtering component, said light filtering  
component specifically transmitting a balance of wavelengths to stimulate a circadian,

photoneural, or neuroendocrine system of said mammal, said balance of wavelengths having a peak sensitivity ranging from 425 –505 nm.

5       **12.**    The method of **Claim 11**, wherein said light responsive disorder is at least one of the group of seasonal affective disorder (SAD), a sleep disorder, circadian disruption, eating disorders, menstrual cycle disorders, non-specific alerting or performance deficits, hormone-sensitive cancers, or cardiovascular disorders.

10      **13.**    A method of treating a light responsive disorder in a mammal, comprising administration of a therapeutically effective amount of light to said mammal, said light being generated by a light system, wherein said light system comprises at least one light source and at least one translucent material component, said light source emitting light through said translucent material component, said translucent material component comprising at least one light filtering component, said light filtering component specifically transmitting a balance of wavelengths to stimulate a circadian, photoneural, or neuroendocrine system of said mammal, said balance of wavelengths having a peak sensitivity ranging from 425 –505 nm.

15      **14.**    The method of **Claim 13**, wherein said light responsive disorder is at least one of the group of seasonal affective disorder (SAD), a sleep disorder, circadian disruption, eating disorders, menstrual cycle disorders, non-specific alerting or performance deficits, hormone-sensitive cancers, or cardiovascular disorders.

20      **15.**    A method of treating a light responsive disorder in a mammal, comprising administration of a therapeutically effective amount of light to said mammal, said light being generated by a light system, wherein said light system comprises at least one light source and at least one transparent material component, said light source emitting light through said transparent material component, said transparent material component comprising at least one light filtering component, said light filtering component specifically blocking a balance of wavelengths to stimulate a circadian, photoneural, or neuroendocrine system of said mammal, said balance of wavelengths having a peak sensitivity ranging from 425 –505 nm.

16. The method of **Claim 15**, wherein said light responsive disorder is at least one of the group of seasonal affective disorder (SAD), a sleep disorder, circadian disruption, eating disorders, menstrual cycle disorders, non-specific alerting or performance deficits, hormone-sensitive cancers, or cardiovascular disorders.

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17. A method of treating a light responsive disorder in a mammal, comprising administration of a therapeutically effective amount of light to said mammal, said light being generated by a light system, wherein said light system comprises at least one light source and at least one translucent material component, said light source emitting light through said translucent material component, said translucent material component comprising at least one light filtering component, said light filtering component specifically blocking a balance of wavelengths to stimulate a circadian, photoneural, or neuroendocrine system of said mammal, said balance of wavelengths having a peak sensitivity ranging from 425 –5055 nm.

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18. The method of **Claim 17**, wherein said light responsive disorder is at least one of the group of seasonal affective disorder (SAD), a sleep disorder, circadian disruption, eating disorders, menstrual cycle disorders, non-specific alerting or performance deficits, hormone-sensitive cancers, or cardiovascular disorders.

19. A light meter system for quantifying light which stimulates a mammalian circadian, photoneural, or neuroendocrine system under normal conditions or which provides light therapy, said light meter system comprising at least one light metering device configured to match wavelength sensitivity of mammalian photoreceptors for circadian and neuroendocrine regulation, said wavelength having a peak sensitivity ranging from 425-505 nm.